

PATENT SPECIFICATION



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COMPLETE SPECIFICATION

Improvements in and relating to Tooth Brushes or the like combined with Syringeing Means

I, EMIL SINGER, an Austrian citizen, of Kollingasse 5, Vienna IX., Austria, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to tooth-brushes equipped with syringeing means, of the type in which a hollow elastic rubber ball is employed both as a liquid container and as a pump for sucking up and expelling the liquid.

In known tooth-brushes of this type the rubber ball is itself employed as a handle, with the result that some of the flushing liquid is apt to become expelled, through unintentional pressure upon the rubber ball, by the mere holding of the rubber ball handle in the hand, and more still when brushing the teeth. If the rubber ball is connected to the hollow stem of the brush by means of a flexible tube the operation of the brush becomes cumbersome, since both hands must be used.

In order to avoid these drawbacks, the present invention involves the housing of the rubber ball, which serves as the liquid container, inside an apertured handle which is rigidly connected to the stem of the bristle-carrier portion of the brush in a manner previously proposed for combs and hair brushes.

Thus the hand manipulating the brush does not grip the rubber ball itself but the surrounding rigid shell which has a large aperture at the side. A brush of this description is extremely simple to use, precludes the possibility of flushing liquid becoming extruded by unintentional pressure upon the rubber ball, and enables the timing of the escape of the liquid, the quantity of the liquid and the pressure under which it is expelled to be regulated at will.

Nevertheless, such a brush has the disadvantage that it is more expensive than a plain brush, and has to be thrown away when the bristles are worn out, even though the relatively costly handle portion is still quite serviceable.

This disadvantage is also overcome in the improved tooth-brush according to

the present invention, in which the handle portion comprising the rubber ball and the hollow rigid casing fitting about the rubber ball is disengageably connected to the bristle carrier, in which is formed a longitudinal duct leading to orifices between the bristles, solely by a screw-threaded socket or the like. Consequently the bristle carrier, which becomes unserviceable relatively rapidly owing to wear of the bristles, can be easily removed merely by disengaging the socket or like connection and a new bristle carrier can be as easily fitted to the handle. The brush is thus made serviceable again very cheaply. Furthermore, bristles of different degrees of stiffness can be easily fitted to suit the requirements of the user.

In the accompanying drawings, which illustrate the invention, Fig. 1 shows, in longitudinal section, a tooth-brush equipped with syringeing means in accordance with the invention, while Fig. 2 shows, likewise in longitudinal section, a modified form of head piece for use as a massage appliance.

Referring to Fig. 1 of the drawings, the head piece or bristle carrier 1 is connected by a stem 2 to the handle 3 in which there is housed a hollow elastic rubber ball 4, and which has a lateral aperture (indicated by a broken line in Fig. 1) through which powerful pressure can be exerted upon the rubber ball 4, so that flushing liquid is forced through a duct 5 in the stem 2 of the brush and through a duct 6 in the bristle holder 1 to the outlet orifices disposed, as at 7, between the bristles 8 of the brush, and is expelled from these orifices in the form of powerful jets.

A considerable quantity of the liquid to be syringed can be drawn up into the ball by first compressing the latter and then immersing the head of the brush in the liquid to be used. However firmly the brush be then held by the handle for purposes of manipulation and brushing of the teeth none of the supply of flushing liquid will escape unintentionally. Whenever desired, however, during or after the brushing of the teeth, the syringeing function of the brush can be brought into

play by the exertion of pressure upon the filled rubber ball through the aperture provided for this purpose in the bulbous portion of the handle of the brush.

5 As shown in Figs. 1 and 2, the end of the stem of the brush is provided with a screw threaded socket 9 into which, after removal of the bristle carrier 1, a
10 massage member 12 (Fig. 2) having a longitudinal duct 10 and outlet orifices 11 can be screwed. This member is provided with massageing projections or knobs 13
15 between which or in which the outlet orifices for the liquid are disposed. This modified type of head piece massages and syringes simultaneously or in any desired
20 sequence, and constitutes a valuable aid in the hygienic care of the oral cavity.

Having now particularly described and ascertained the nature of my said invention, and in what manner the same is to be performed, I declare that what I claim is:—

1. A tooth-brush combined with

25 syringeing means, consisting of a handle portion which comprises a hollow elastic rubber ball, capable of exerting suction and of being compressed and serving as a
30 container for the liquid to be syringed, and a hollow rigid casing, shaped to fit about the rubber ball and provided with an aperture in its side through which
35 pressure may be inserted upon the ball, said tooth-brush also comprising a bristle-carrier portion in which is formed a longitudinal duct leading to orifices between
40 the bristles, and the said two portions being disengageably connected together solely by a screw-threaded socket or the like.

2. A syringeing tooth-brush as claimed in claim 1 and substantially as described with reference to and as illustrated in the Figures of the accompanying drawing.

Dated this 23rd day of November, 1936.

REDDIE & SON,

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[This Drawing is a reproduction of the Original on a reduced scale.]

Fig. 1

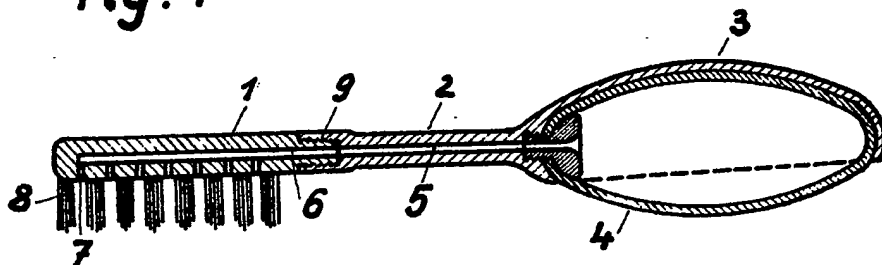


Fig. 2

